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ABSTRACT

This report identified problems and concerns associated with implementing competency-based vocational education at the local level. It also identified those measures which have been taken to resolve such problems. The first section is organized into these two types of implementation problems: personnel-related problems and administrative-related problems. Personnel related problems addressed include teacher's role change, instructor-referenced standards, age/grade structure, time-based instruction, evaluation, and training the teacher. Administrative-related problems discussed are organizational factors and administrative coordination. At the end of each of the two categories of problems, suggestions drawn from previous literature on implementing innovations are provided. A brief second section considers some of the major problems of the Instructional Support System for Occupational Education (ISSOE) identified in phase 2 of the Dissemination project. (Final report is CE 026 987.) The problems are organized into personnel- and administrative-related problems in ISSOE. A final section lists ten points believed to demand immediate attention to avoid loss of momentum in ISSOE implementation. (YLB)

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ISSOE

Managing ISSOE Programs

Administrative Issues

Technical Report, Number One

ED194747

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Administrative Issues

Technical Report, Number One

August 25, 1980

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INTRODUCTION

The objectives of this report are to identify problems and concerns associated with implementing competency-based vocational education (CBVE) at the local level, and to identify those measures which have been taken to resolve such problems.

The importance of monitoring local problems and concerns relative to CBVE has already been documented, in a preliminary fashion, in previous research on the dissemination of the Instruction Support System of Occupational Education (ISSOE). This documentation has taken two forms: a literature review on educational change in general (Beuke & Farrar, 1979), and a study of actual participants in ISSOE (Ridley, 1980).

In a sense, this technical report represents an attempt to bring the two types of contribution, represented by these two previous reports, into a closer juxtaposition. The obvious extension of the literature review was to the types of innovation exemplified by ISSOE, i.e., to the needs and concerns of administrators relative to CBVE (or, at least, CBE) and the various measures required to meet them. Furthermore, the specific findings regarding the concerns of actual participants in ISSOE needed to be related more systematically to the broader perspective of the literature reviews.

One important concept found in the earlier literature review was that any innovation passes through discernible stages, from experimental adoption through institutionalized utilization. A corollary is that the problems and concerns that arise at one stage may be relatively uncorrelated with those arising later on. Thus, the charge for the present study of the literature was to make a distinction between perceived (or anticipated) problems and "real" problems, and to uncover areas of possible mismatch between those problems that were anticipated and those actually experienced.

Important as this distinction is, two points should be made at the outset. One is that problems that are "merely" perceived can persist and become problems in their own right, insofar as that which participants believe

regarding an innovation affects their attitudes and their performance. The second point anticipates one of the major findings of the present report. The literature revealed little evidence of actual administrative planning for anticipated problems, as contrasted with an enormous body of material on the consequences of the lack of such planning. Thus, lack of planning for the unknown, inadequate provisions, and poorly conceived emergency operations, summarize the careers of many innovations that failed. The reverse side of this is that leadership, careful administration of resources and personnel, and accurate forecasting, characterize successful innovations. In essence, this report documents these two points and then applies them to the administration of ISSOE.

The conclusions stated in this report are the product of a careful review of the existing literature. However, the report is intended to serve as a working paper to guide administrative decision makers rather than as a scholarly document. The interested reader will find a selected bibliography at the conclusion of the report for further reading on the relevant points should more documentation be desired.

IMPLEMENTATION PROBLEMS

The problems of implementing CBVE programs are essentially those of implementing any change in school policies and practices. Ostensibly, all that sets CBVE (or CBE) programs apart from other innovations is their major emphasis upon student concerns. However, this one difference is crucial. As the following review documents, difficulties arise frequently because resources are inadequate to meet the student-based concerns of teachers, administrators, and parents.

Problems of implementing innovations can be organized and sub-divided in many ways, as the literature illustrates. The organization we have selected includes two types of implementation problems, to be addressed in the following order: (A) personnel-related problems, and (B) administrative-related problems. These two categories afford a convenient breakdown of the major implementation problems. The reader should bear in mind, however, that since any categorization is somewhat arbitrary, the problems discussed in each category will overlap and interact with each other.

Personnel Related Problems

Personnel related problems generally include the changing role of the teacher, the competency or training skills of the teacher, the teacher's self-esteem, the goals of the innovator, and the approach (group vs. individual) implementation efforts take.

TEACHERS' ROLE CHANGE

Many commentators cite teachers' role change as a difficult problem that is compounded by administrators' simple failure to be concerned. Zaltman and Duncan (1977) account for this administrative neglect in terms of a "rationalistic bias." That is, administrators too often erroneously assume

that teachers will accept any innovation that is offered provided only that an adequate rationale is presented too. (Among other difficulties with this assumption, it fails to explain why that which one considers an adequate rationale, another may consider foolish.) Problems in teachers' role changes are evident, for example, when administrators specify roles teachers are expected to perform, but give them no opportunity to voice their opinions on these roles nor any adequate training on how these roles translate into classroom teacher behavior.

South (1976) found that "destabilizing" (i.e., suspending to a degree) existing goals and roles helped teachers adapt to the expectations of new roles and goals. Douglas (1976) also emphasized the need to consider explicit role expectations which are essential for the new role behaviors.

"Role overload," as it is commonly termed, is another problem that is frequently identified. Teachers are often expected to change some of their teaching roles and maintain others, all without benefit of the time allowance and assistance they need to adjust to the new role. Role change, extremely difficult under the best circumstances, becomes even more difficult when administrators fail to specify precisely what needs to be done. Examples of inadequate specifications are vaguely worded communications relative to goals, prescribed role behaviors, lines of authority, etc. The results are "classical" and "predictable." The "innovation" quickly takes on the characteristics of the former practices.

Time is another important ingredient to consider in planning role change. The implementation process must "nurse" role changes along, and take advantage of the uncertainty created by destabilizing previous roles by caring for the concerns associated with new role adoption. Since roles are acquired over years of both rational and emotional interaction with a changing environment, the adoption of new roles must follow the same route. The emotional correlates of new role acquisitions, in particular, are slow in developing. Thus, the adoption of new roles takes time; the process cannot be rushed.

Problems frequently develop early in implementation efforts that result primarily from too little face-to-face interaction. Such direct contact helps to deal with a number of obstacles immediately and effectively. These are: (A) uncertainty about the goals of the implementation; (B) specific roles or tasks an individual may have; (C) assisting problem solving; and (D) building trust between the major participants involved with the implementation. Particularly, any lack of trust (frequently cited by teachers and some administrators who believe that they are being "used") must be avoided early on and throughout the implementation process.

Even when all concerned parties initially express their approval of an innovation, they will usually resist implementation in reaction to problems they perceive as due to inadequate administrative action. Again, stress must be placed on continual face-to-face contacts; administrators must develop mechanisms for listening to and resolving teacher problems as they arise.

Other concerns affecting teachers that are frequently cited in connection with CBE implementation are the following: instructor referenced standards, age/grade structure, time based instruction, and evaluation. To better understand their impact on implementation, each of these concerns requires further analysis presented immediately below.

INSTRUCTOR REFERENCED STANDARDS

Instructor referenced standards are the standards most commonly used today. In almost all schools each teacher uses some idiosyncratic method for assigning grades. There is great variety in grading practices both among teachers and within the same teachers across different classes. In contrast, most CBE programs adopt standard criterion referenced grading procedures for which adequate training is available to teachers to assure that they become capable of assessing student achievement adequately.

AGE/GRADE STRUCTURE

The standard age/grade structure most prevalent in this country's educational system poses problems for CBE. Our present grading system owes its widespread use almost entirely to its efficient management properties (e.g., students are easily classified by age). Thus, age has become the major determinant for grade level stratification. CBE urges the use of proficiency, rather than age, as the only criterion by which students are measured.

Perhaps, however, the most difficult issue presently confronting the implementation of CBE and CBVE rests with evaluation and with the quality of tests used to measure student performance. The concepts of criterion referenced testing represent a radical departure from the practices with which teachers are most familiar owing to the prevalence of age/grade structure with its lockstep procedures for advancement. Thus this issue merges with those of instruction for proficiency, evaluation, and teacher training, discussed below.

In addition, the traditional age/grade structure of schools exerts an influence on the wider public that is ignored only at the peril of the innovation. Even in the ideal circumstance in which teachers, administrators, and students are enthusiastic about CBE, the wider public, steeped in the traditional school practices, will not tolerate abrupt departures from these practices. It is highly desirable, therefore, that these changes be introduced in small increments.

TIME BASED INSTRUCTION

Time based instruction, or gearing instruction to fifty-minute "periods" (the usual case), is commonly felt to be antithetical to CBE. However, CBE does not necessarily require flexible scheduling, but suggests only that learning is more effective under conditions in which instruction is not confined to the periodicity of the hour hand. Typically, fixed-time instruction is pursued because it is so much more administratively controllable.

Both age/grade student stratification and fixed-time instruction are management procedures introduced simply for the maintenance of the organization. Altering these procedures, for instance by giving teachers the option to allow students as much time as they want to work on a certain project, or by designing student assessment techniques based on criterion referenced measures, forces the administrator to deal with a greater amount of irregularity. Such changes also force teachers not trained in CBE to deal with more irregularity. Thus, both administrators and teachers will experience an increased need for training for better administrative and classroom management required in their new roles.

EVALUATION

In contrast with standard teaching practices, the adoption of CBE can produce resistance because of the work load. For example, in order to be effective CBE requires more frequent student assessments than standard practices require. Often teachers are unprepared for these additional monitoring activities. Also, in CBE many students require frequent and persistent practice to achieve competency. Standard classroom practices usually dictate that a teacher spend a fixed amount of time on one objective, and then if students don't "get it," instruction moves on anyhow. This approach has no place in a CBE program. Appropriate teacher training and inservice in evaluation techniques required by CBE (task analysis and criterion referenced measurement) are critical. In this regard, alliances with teacher training institutions can improve the cadre of CBE educators.

TRAINING THE TEACHER

Teachers' previous experiences with innovations almost invariably produce poor attitudes about implementing any innovation. Too often teachers feel they are improperly prepared, have had too little input, and know only roughly what they are supposed to be doing. Gross, Giaquinta and Bernstein (1971) cite these two major reasons for the failure to implement an innovation:

lack of clarity about the innovation (especially, what it means for teacher behavior), and inadequate training in developing the new skills required.

A number of CBE projects (notably Florida's) have attempted to ameliorate just these problems. They have used the following techniques: inservice training; shared decision making through consultation, workshops, and total staff involvement (including administrators); and improved communication between all authority levels and within all departments while fostering the intended CBE implementation (Crittendon & Massey, 1978).

SUGGESTIONS

The following suggestions are drawn from previous literature on implementing innovations. They represent the collective experience and wisdom of researchers, consultants, and administrators who have worked on implementation, as well as implications drawn from the literature on educational change.

1. The goals of the innovation should be as compatible with former goals as possible.
2. Goals, roles, and performances must be written clearly and explicitly.
3. Face-to-face contact between key participants (teachers, administrators, etc.) should be maintained during the implementation process and should not slacken until the innovation becomes institutionalized.
4. Trust-building is essential. Mutual trust can be fostered through maintaining personal contacts, soliciting meaningful input from all levels, and sharing decision making responsibility on all matters that involve the major participants.
5. Administrators must be fully informed as to the goals and requirements of the innovation. Thus, their training is as indispensable to successful implementation as is their support.
6. Teachers and administrators must believe that they can acquire the necessary skills and competencies to perform as required.

Recommended provisions include workshops, effective use of consultants, and immediate feedback on problems which develop. Consistent informal support from the interaction among teachers and administrators is also recommended.

7. The reward structure should be altered in such a way as to ensure that those who perform as required by the innovation will be rewarded.
8. The role changes which accompany an innovation must be made clear. The changes must show explicitly how, in what areas, and to what extent each individual is affected.
9. Attempts should be made to develop an "advocacy" group of credible individuals who can promote the innovation effectively.
10. Care must be taken to monitor group effects on the individual's perceptions of the innovation and attitudes toward it. For example, any "bad mouthing" of the change needs to be dealt with immediately. If possible, disaffected persons should be converted through such means as trust-building. Information must be clear, and it must address forthrightly the problems teachers are most likely to perceive.
11. The change should be presented in such a way as not to threaten the self-esteem or demean the previous work of new recruits. There is a better way to introduce the innovation than with the veiled message: "Let me show you what you've been doing wrong all your life." The innovation must be perceived as building on past good works.
12. The implementation of the innovation should not be perceived as a threat to the stable power influences in the organization.
13. Implementors should attempt to ameliorate common educator characteristics that can threaten implementation, such as low risk-taking and the tendency toward routinization of procedures.
14. Care should be taken not to oversell the innovation by promising immediate benefits that are difficult to deliver. High expectations, coupled with the delays and other problems that attend introducing anything (time delays, authority conflicts, materials, etc.), can be fatal. Some have found that by monitoring the perceptions of individuals over time, and generating enthusiasm when delays occur, expectations can be moderated to forestall the sense of disappointment that arises whenever accomplishments fall short of goals.

15. The individuals who are implementing the innovation should feel there is an excellent chance for it to be adopted. Again, these individuals need to see clear and persuasive evidence of sound long range planning.
16. Care should be taken to relieve the fatigue that many implementors experience, especially during the early phase of implementation. Teachers and administrators will be involved in extra meetings, and they will need extra time to adapt to their new roles. They will be concerned about real or imagined harmful effects of participating in an "experiment" on their careers (e.g., possible moves within and outside the district and/or up the career ladder). The demands of increased time away from families, hobbies, etc., will tend to increase the likelihood of fatigue and subsequently resistance. Meetings, therefore, must be productive for those involved. Participants' input must receive immediate and sensitive treatment. If participants should begin to suspect they are wasting their time, remedies must be acted on quickly.
17. It is important to simplify the innovation's requirements as much as possible. If the innovation is difficult to understand, the uncertainty of both roles and goals will increase. The innovation is unlikely to be implemented when participants are unsure of what they are doing.
18. Participants in the innovation must perceive a need for the change. This means that they must have some idea of what needs to be changed, and how it might be changed. Their involvement in developing the innovation is essential. They must never feel they are being "used."
19. Teachers will need help in implementing a change. Even those who believe they have it down "pat," will need help translating objectives into specific classroom behaviors and activities.
20. Participants must feel that the proposed change has advantages over past practices. This relative utility should be nursed out of those participants who are likely to be using it. That is, teachers must feel, to some extent, that they have discovered for themselves the relative utility of the new practices. This will develop commitment and a more thorough understanding of the change.
21. Finally, some researchers have suggested the need to recruit an individual whose specific task is to ferret out problems which administrators and teachers are having and transmit these problems

immediately to someone else with the authority to act. This person should have the freedom to "roam" and "discover" problems participants are having, as well as those which are given to them. Obviously, this person must be well-trained in the change, and ideally, would be someone who is committed to the change and who has been involved in earlier developmental work on the innovation.

Administrative Related Problems

Central to the development of mechanisms to expedite public implementation efforts is an understanding of the structure of education. If one uses Lasswell's (1976) definition of politics ("who gets what, when, and where"), then education is political throughout. On the highest level, federal and state legislators are elected by a public (or publics). Similarly, education operates within a basically democratic framework. At the local level, a district freely elects school board members who represent and respond to the desires of the electorate. Policies which arise from these public officials are restricted primarily by their constitutionality.

Such governing bodies seldom have the time or expertise to satisfy the demands for services from this public. Thus, administrative organizations are constructed to provide services in an efficient and effective manner. Ideally, the administrative organs are charged with administering policy which has been formed by the representatives of this public. Again, the major constraint, outside of policy parameters themselves, is the constitutionality of administrative practices. However, this ideal of simply administering policy to the public is not, in fact, an achieved reality. Rather, through the administration of policy, that policy is remade. That is, the normal procedure is to make policy decisions conform to the requirements of administering them to the public. Thus, the common tirade is against "administrative policy making," rather than "the peoples' policy making" (through their duly elected representatives).

There are other factors which impinge on the administration of change. However, let it be emphasized that although policy is formed by the populace through their representatives, it is often remade to conform to the administrative need to translate policy into practice. It is in this translation that structural organization plays such a critical role in how the policy is implemented.

Our federal and state governments provide ample illustrations that the implementation process itself often disfigures the policy intent. In virtually all such cases there is a common denominator: implementation is done as though one were managing a bureaucracy. Bureaucracies can be an extremely efficient and effective means of translating policy into practice. However, "bureaucracy" has come to connote inefficiency and insensitivity because of ingenious efforts to correct far worse organizational practices. Still, education cannot have all the characteristics that define a bureaucracy because of its inherently political nature. This political quality permits policies to issue from the centralized body, only to be revoked by an outraged constituency.

Thus, if schools are not bureaucracies, the first question is what constitutes their organizational structure. Karl Weick, a noted Cornell organizational theorist, has suggested that schools are "loosely coupled" organizations. That is, there are no strict authority, communication or decision making lines. The idea is fairly accurate, but difficult to apply for the purpose of understanding specific school organizations. Recently, however, Hanson (1976) has extended the notion of loose coupling by providing a specific framework for comparing school organizations to traditional bureaucracies.

Hanson states that schools cannot be considered traditional bureaucracies. They are "modern bureaucracies" in which both teachers and administrators have legitimate authority. Each group also has sanctions to control the behavior of the other. Thus, in the implementation of innovations, the spheres of influence of both teachers and administrators should be respected. This critical issue has been traditionally ignored because implementors have assumed that an administration has sufficient authority to insure

adoption of change. The results are predictable. Teachers will resist and refuse to implement a change which they feel is unresponsive to their needs or alters their sphere of influence.

In order to prevent hardening of opposing positions, confrontation--especially large scale confrontation--should be avoided. Simply stated, the professional conduct and expertise of teachers needs to be respected in the implementation process. Even if administrators had the power to reshape their personnel and programs as a sculptor reshapes clay, the repercussions of such activity would be distinctly counterproductive. The disfigured sculpture can both frustrate the sculptor and discourage future sculptors.

Thus, fundamental to the implementation of change is thorough planning and knowledge of what is likely to be encountered. The evidence is dramatic and unmistakable. Except in the rare case where authority and sanctions are monolithic and irresistible, administrators must respect the attitudes, knowledge, and desires of their subordinates.

A second rule of thumb when considering implementation is the role of the administrator. As indicated earlier, the intended role is one of effective and efficient dispensation of policy. This intended role must be executed according to several principles for implementation to be effective. The most basic principle is simply that if you want someone to do something in a certain way, you must provide them with everything they need to facilitate the activity. Unfortunately, the principle is easier to state than it is to carry out. More than supplying materials, administrators must also supply time, training, and support for teachers' continuing needs. Thus, part of the planning task is to anticipate everything that a teacher will need to do in the implementation of the program and provide all necessary materials. Such foresight will assure that teachers' extra efforts do not produce fatigue, role overload, or resistance of any kind. The system must be clear and easily followed. Standardized forms for all processes, materials requests, student transfers, drop-outs, new staff recruitment, testing, evaluation, profiling, and other such systematic needs should be pre-tested and formalized into the system.

No matter how thorough the planning, unanticipated events will occur. Indeed, the successful organizations are generally those that, in a sense, anticipate the unanticipated. An analogy can be made from the sophisticated technological field of computer production. Highly trained scientists carefully design circuits, which have known properties. Nevertheless, each circuit board must pass through a long "debugging" phase. Even though every input is known in such a case, putting it all together often produces unintended effects, or no effects at all. Furthermore, even though scientists thoroughly understand the process of linking circuits, after the tested circuit boards are interconnected, they enter another extensive debugging phase. Scientists understand that in putting the pieces in place, the parts and their intended interrelationships are routinely altered.

Thus, debugging is a standard function in the production system in sophisticated technological fields. Even though all the inputs are theoretically known and understood to behave in specific ways under specific conditions, the production system cannot operate successfully without building in the capability for routine testing and correction of products.

Consider now a system of people working in a quasi-political, quasi-bureaucratic organization in which few of the inputs are known. If debugging must be incorporated within an advanced technological production system, it is even more imperative in the more problematic systems through which innovations are introduced. Yet seldom is debugging an institutionalized part of the implementation process. This is not due as much to negligence as it is due to legislative and fiscal constraints. Several authors (e.g., Wildavsky & Pressman, 1973) have stated that institutions granting research and development funds view speed as the single most important criterion. This is, at least in part, the apparent consequence of budgeting and allocation procedures. But whatever the cause, funding agencies rarely expect or plan for debugging. Rather, they expect only to provide sufficient money to produce a prototype, naively hoping for success on its maiden flight. Unfortunately, it is almost axiomatic that no prototype works as intended. Indeed, few work at all. All those humorous little laws of organizational behavior (e.g., Murphy's Law: "If

it can go wrong, it will") accurately depict the pitfalls inherent in implementing even the most well-conceived programs.

A second fundamental task of implementation, then, is to recognize and anticipate the need for working out the bugs in the system. A mechanism with the sole mission of debugging is essential. Such a mechanism might work via the functions of the program. By examining the program, one can break the mechanisms down into groups such as: (A) materials/time, production, and delivery; and (B) decision points and provinces of authority. Individuals in charge of production must then work on the timely production of materials, materials quality and the most efficient means of delivering materials. Included with the systematic program plans for the maintenance of the program should be emergency plans for meeting immediate needs or crisis situations.

Such mechanisms are administrative and should be provided as part of the organizational structure. Feedback mechanisms must be provided that respond quickly to user needs and any problems associated with the change. Feedback mechanisms can be considered a function of administratively monitoring the program. Much as a patient in a hospital has monitors connected to all vital body functions, a program planner must have the most comprehensive monitoring capabilities possible.

ORGANIZATIONAL FACTORS

A number of programs and researchers have identified certain organizational factors which influence implementation. Among these are deformalization at the lowest levels where administrators and teachers interact, encouragement of advocacy groups and entrepreneurial behavior, centrality of communication, large organizational size, resources, proximity to sources of external support, and modified reward structures.

Deformalization at the lowest organizational levels is intended primarily to build trust and channel teacher input. The development of advocacy groups

accomplishes two important objectives. First, it helps increase the number of advocates toward the essential "critical mass" (i.e., the minimum number of advocates required for implementation to be successful); and second, it builds upon members' needs to influence and be influenced by their peers.

Entrepreneurial behavior refers to the need for aggressive risk-taking. Although voices are frequently raised to promote change and to enlist supporters of change, the pull of the status quo is an ever present reality. Educators tend to be low risk-takers and supporters of tradition, which is defined by the roles they have routinized on the job. Destabilization of roles, with the added prospect of change that is presented in attractive terms, enhances chances for implementation.

Centrality of communication has been found productive by some analysts and unproductive by others. This is largely due to an ambiguity in defining communications. Those communications which do not require authoritative decisions should be deformalized and diffused as much as possible. However, authority communications, or those that demand that decisions be made, need to be centralized. Of course, centralization alone is insufficient to assure efficiency. For example, in the implementation of a statewide program such as ISSOE, centralization will still leave multiple strata for decisions. The "decision points" should be reduced to the fewest number possible, and access to these should be immediate in both the maintenance and emergency modes or organizational conduct.

Authority for decision making must be clear. Decision points must provide for quick clearance, and the province of authority must be spelled out, including an "other" type of category to assist in handling of unanticipated events.

Large size, rather than being an impediment to implementation, actually assists it. Thus in the case of ISSOE, its extensiveness can be an aid to implementation. Nevertheless, in order for size to promote implementation, it must be well-articulated, well-monitored, and provide immediate response to evaluated needs.

Time delays associated with resources are perhaps the most frequently cited implementation problem. Either there are insufficient materials--too much of one kind and too little of another--or the required materials are never present when needed. The frustration developed from such events persists as resistance throughout the implementation process. Thus it is critical that all materials be where they are supposed to be when they are supposed to be there. This goal of coordination and delivery must not be underestimated. The allocation of time is crucial in the planning, delivery and debugging of the system.

Mechanisms for training latecomers must be provided. Attempts at training new recruits can be facilitated by affiliation with teacher training institutions. The high turnover in education, in addition to the craft skill required of many vocational educators, makes staff development essential. Training can be provided via workshops, staff observation, peer teaching, and the like.

ADMINISTRATIVE COORDINATION

Standard administrative coordination activities include the minimizing of duplication, and the maximizing of program integration, coherence, efficiency, and effectiveness. Duplication, however, is necessary and sometimes even desirable during the early phase of implementation. It is during this phase that the administration of the program is glutted with material needs, time needs, goals clarification, organizational structural changes, fatigue, strain, etc. This is the time when the implementation process is most likely to kindle resistance toward practices which are likely to persist throughout the entire duration of implementation.

More resources do not automatically guarantee implementation. While resources can provide needed personnel, time, energy, and materials, the quality of each of these must meet the needs of the program. The start-up of a program requires more resources than are needed to maintain a program. If resources are not available or not working as intended, the program will suffer irreparably.

Delays can take the form of materials, resources, and unfulfilled expectations. People involved with a new program expect results. Too often, the expected outcomes of an innovation are oversold in an attempt to develop early commitment. Typically, staff are unprepared to deal with slow, incremental, and inconsistent outcomes. They are equally unprepared for the early phase of implementation with its attendant problems and the difficulty students have in absorbing innovative practices.

Furthermore, wherever implementation has been in progress for some time, there is invariably a highly intensive system characterized by a cadre of committed, "battle hardened" professionals. That is, the members of the highly intensive system do not simply join in and begin working as a well-organized team. Rather, alliances are built. Authority is delineated and clarified as the activity of participating defines and redefines the roles. Once again, time is a crucial factor.

Thus, while teachers must be well-trained and well-prepared, administrative teams must be at least as well-prepared. This need for training is seldom fulfilled, often because of some rather simple and easily detected problems.

Schools in a metropolitan area have a cultural milieu quite different from that of the rural school. Both the ways their respective administrative tasks are carried out and the expectations of their communities and staffs are distinctly different. Despite these differences, an identical commitment to a change, and to a successful implementation of that change, is expected. Administrators' willingness to modify long-standing practices to accommodate a change is an indicator of their commitment to the change. Such changes can be mandated. Sanctions and authority can coerce change, though it is much like pounding a square peg (an innovation) into a round hole (standard practices). It the hole which will alter the peg so that its shape conforms.

Administrators must be committed to the change. However, if the proposed change fails to make reasonable allowances for the needs of local

participants, administrative commitment to the change will be minimal. The degree of flexibility allowed for each component of the innovation must be clear. This essential information can be either stipulated by a central authority, or negotiated between each local administrator and the central authority. Of course, these procedures cannot compromise the goals of the innovation beyond a certain point, or it will cease to be the original innovation. Whenever the goals of the innovation and the goals of the local province are incompatible, dialogue, negotiation, problem solving, or other mechanisms must be present to resolve the incompatibility.

Frequently, however, incompatibility exists only on a semantic level. Whenever differences are perceived to exist due to vaguely worded goals and policies, there is a real need to restate goals and policies to make the intended change both more clear and more obviously compatible with local idiosyncrasies.

Another problem frequently can arise when administrators plan vigorously but have a faulty idea of what planning should provide. The result can be strategies that are ill-conceived, if not toally unnecessary. Misspent resources, especially human administrative resources, can be quite debilitating. The implementation of the program must not be divorced from the program itself. There must be no missing links between program objectives and actual practices. Mechanisms are needed to provide for the anticipated day-to-day execution of the programs. Administrators are seldom prepared to plan for such activities. When considering implementation, policy makers must understand that members within the organization will be most concerned with how the innovation affects them. Thus, measures should be taken to assure members that the proposed change will not threaten their power but will be, on the contrary, an unmixed blessing for them.

Finally, the conclusion at which Victor Thompson (1965) arrived must be underscored. The development and implementation of innovations cost a lot.

If policy makers are truly intent on implementing a program, then the money needed to meet the necessary conditions of implementation must be available as well.

SUGGESTIONS

1. Teachers have quasi-organizational authority with commensurate sanctions capable of derailing even the most desirable programs that enjoy administrative support. Thus, teachers' spheres of influence must evoke respect at all levels.
2. The professionalism of teachers also needs to be respected. This can be done by involving teachers in all aspects of the development and implementation process.
3. A debugging period should be provided, and mechanisms to deal with crises (materials delay, personnel resistance, etc.) should be operative.
4. Attempts at trust-building should begin before program development and continue through implementation. Some examples of pertinent techniques are: involvement of key personnel in all areas which directly affect them, mechanisms to manage and resolve conflicts, and timely and effective responses to teacher-initiated issues.
5. Advocacy groups should be organized early. One such group would consist of respected, influential teachers who are judged most capable of building strong commitment in other teachers. A similar group of administrators would attempt to build commitment in their colleagues.
6. Administrative expertise in the intended program is essential. Administrators' training must be thorough enough to make them the local experts on the program.
7. Administrative support or commitment to implementation of the program is equally necessary. This condition goes hand-in-hand with administrative expertise in the program.
8. Feedback on administrative decision making must come from all levels and all directions and receive immediate attention. It is important to identify problems promptly and resolve them satisfactorily. Problems must not be ignored, glossed over, or suppressed. Suggestion boxes,

teacher/administrative access to decision makers, and personnel whose primary task is to find and isolate potentially resistance-creating issues, are all examples of useful feedback mechanisms.

9. Entrepreneurial behavior should be encouraged among users. Means to increase risk-taking, and aggressive use of the intended program, include persuasive emphasis on its relative utility, involvement of staff in the "discovery" of its superior qualities, and change of the reward structure to provide monetary and other incentives for implementation.
10. A central authority structure, with clearly defined provinces of jurisdiction, is clearly needed. This authority structure should include an "ombudsman" whose authority extends into the gray areas. The "ombudsman's" authority often needs to supersede that of an area decision maker.
11. Diffusion of all comunications is important. A formal structure should be present with as many channels and directions of communication as possible. An informal structure that both builds upon and fosters trust should be in effect and widely used.
12. The number of clearance or decision making points should be reduced to the lowest possible operative level.
13. Large organizational size improves the chances for implementation.
14. Transportation and all aspects of materials delivery should be clarified. Alternatives to the standard operative system should be available and emergency procedures should be explicit when immediate deliveries are needed. Delay in services or materials must be avoided to the extent possible.
15. Mechanisms for training new recruits, whether administrators or teachers should be accessible at the time of hiring. One example would be a team of operatives in other areas who could join together quickly to provide training, consulting, etc. Other methods include peer training, observation, workshops, etc.
16. If decisions are negotiated at one level, they can, and probably will, have repercussions on other regional and organizational levels. These effects should be anticipated as accurately as possible.

17. A specific task-oriented group of authoritive decision makers should take the reins in areas of high uncertainty. This is similar to the "ombudsman" idea offered earlier.
18. During early phases of the implementation process, the organization should be ready to deal with great uncertainty and with a high demand for materials, time, personnel, decisions and other administrative resources. Duplication of effort at this early stage should arouse much less concern than outright failure to provide the needed resources.
19. Administrators at local and other levels should be trained to provide leadership and to support their staff. Fatigue and strain are likely to occur quickly and frequently in the implementation of the program. The administrator must be sensitive to these developments, and provide resources or other methods that promise relief.
20. After implementation is begun and the early conditions of chronic crisis abate, the organization must be ready to routinize many of the needs uncovered by the earlier crisis phase (such as resource delivery).
21. Administrators should be trained to deal with the waxing and waning of expectations held for the new program. There will be delays from the standpoint of implementation and intended outcomes. Teachers and administrators must be aware of these delays, and administrators should have the capability to modify expectations.
22. Meetings should be carefully planned so as not to squander the time teachers need in adapting to their new roles. Teachers will feel pressed for time in every way. They may even feel that their new classroom roles are affecting their home life. Care must be taken not to overtax individuals who are already under stress. (At the same time, however, sufficient meeting time must be allowed to deal with teachers' concerns adeuqately.)
23. The advocacy group can act as a "counseling" agent for teachers who begin to feel the strain of their commitment to implementation.
24. Finally, if policy makers <u>really</u> want to implement a program, they must make available adequate time for "debugging" all needed resources and sufficient money.

ARTICULATION WITH EARLIER DISSEMINATION RESEARCH

The ISSOE Dissemination, Phase II Final Report (Ridley, 1980) addressed a number of issues in the implementation of ISSOE. These issues were identified through interviews and surveys administered to many participants in ISSOE at a variety of levels. In this section we consider some of the major problems of ISSOE participants, especially those pertinent to the management of ISSOE implementation, from the points of view of those most directly responsible for this management. In the Phase II sample, these individuals include Area Facilitators, Regional Coordinators, and Directors of Occupational Education. We organize these problems and concerns in terms of the categories presented in the technical report.

One qualification must be mentioned at the outset. The findings of ISSOE Dissemination, Phase II are based on research that was completed prior to April, 1980. In the ensuing period, a number of changes in ISSOE, especially at the SEA level, have been initiated that have implications for the application of this technical report to current practice. The reader who is cognizant of these changes will need to make these adjustments in interpretation. To the extent that we are aware of the changes, we will help the reader out as well. One caution against discounting previous problems as passe, however, is that perceptions of participants, based on their prior experiences, can persist into the present and remain problems in their own right.

PERSONNEL RELATED PROBLEMS IN ISSOE

Under "Personnel Related Problems" the following problem areas are particularly pertinent to the previous dissemination findings:

- face-to-face contact between key participants;
- administrator expertise and support;
- monitoring of individual attitudes and dealing with disaffected participants;
- spotting problem areas and acting upon them.

Face-to-face contacts between key participants was revealed to be a problem area. Delay in feedback and in needed support materials was related to this problem. Many participants directly affected by these delays could interact only indirectly with those they perceived to be responsible for the delays. Trust and confidence, therefore, was not always maintained. More efficient delivery of resources should help to solve this problem, especially through face-to-face interaction between local participants and SED or its designated representatives.

Administrator expertise was revealed to be a problem area in that administrators (Regional Coordinators and Directors of Occupational Education) perceived the need for clearer guidelines on implementation. Administrator support was also a problem whenever administrators perceived implementation as taking too long to become a reality. The expansion of the CIOE/ISSOE Field Test, and more adequate specifications of what implementation implies, are positive steps.

Monitoring of individual attitudes, and spotting problem areas, are two other pertinent categories. As the literature reveals, disaffected participants, especially those in positions of influence, can hurt the chances for implementation. A number of such individuals were found in the previous research. It remains to be seen whether correcting the sources of discontent, and providing for the roles devoted to dealing with problem areas, can reduce the number and influence of such disaffected persons.

ADMINISTRATIVE RELATED PROBLEMS IN ISSOE

Under "Administrative Related Problems," the following additional problem areas, also pertinent to the previous research, were identified:

- mechanisms to deal with crises;
- feedback on administrative decision making;
- clearly defined authority structure;
- clarification of materials delivery with alternative procedures;
- dealing with peak demand for support materials;
- modifying expectations.

As discussed earlier, procedures for coping with emergency demands should be an integral part of the planning for the maintenance of the program. Such emergency plans depend upon an adequate recognition that corrective action, or debugging, is an inescapable part of successful implementation. The ISSOE Dissemination Phase II study revealed that many problems reported by participants were not well-anticipated, nor were emergency procedures in place far in advance in order to mitigate the problems as they arose. While more evidence of long range planning may be present, the earlier perceptions may prove difficult to reverse.

Feedback on administrative decision making was an evident problem area. As the literature showed, it is essential to identify and resolve problems as they arise, and ideally, personnel should be designated to find resistance-creating issues before they become problems. Again, some informants perceived a lack of long range planning for potential problems. On the other hand, previous funding of dissemination research is one indication of the willingness to anticipate and deal with implementation problems. Another step is the creation of new roles to cope with these problems.

The lack of a clearly defined authority structure was another relevant problem area. The early concern in ISSOE to involve many individuals in curriculum development tended to bring about an overly diffuse, decentralized structure in which the lines of authority were sometimes vague. Also, the need for an "ombudsman" whose authority extends into the gray areas was not generally recognized.

The need to clarify and develop alternative routes for materials delivery was extremely evident. Participants in virtually every category discussed the problem of delays in providing materials and other support. There is now evidence that catalogs and other needed materials will be made available in a more timely fashion.

In addition, the early stages of implementation present unique demands in terms of high uncertainty and peak demand for various types of resources. Previous dissemination research revealed some problems in dealing with uncertainty and providing all resources as needed.

Finally, the literature strongly suggests that some of the above perceived problems are exacerbated by the unrealistically high expectations that new recruits can have. Often they expect to see results in the implementation process much faster than is realistically possible. At least in part, the frustration of participants at the delays in implementation can be accounted for by their initially high expectations. Thus, techniques to monitor and modify expectations are needed. Adequate preparation for delay can take the form of a better understanding of what is required in implementing new programs. Knowledge of the previous history of large scale innovations, both successful and unsuccessful, can supply the participant with a useful perspective within which more realistic expectations will develop.

IMMEDIATE IMPLICATIONS AND RECOMMENDATIONS

The previous sections of this report dealt with administrative issues in the implementation of CBVE. These discussions were primarily based upon a literature review and previous ISSOE dissemination research, which together provided theoretical and applied perspectives and insights that should be useful to those who are responsible for the administration of vocational education in New York State. However, the points made earlier, to be most useful, need to be backed up with specific recommendations for immediate action. These immediate implications for ISSOE, while directly tied to the foregoing discussions, will draw upon the 1979-1980 CIOE/ISSOE Field Test experience for the major pieces of supporting evidence. The ten points listed below are those believed to be most crucial in that they demand immediate attention. There is a danger, if points such as these are neglected for very long, that the momentum in ISSOE implementation will be irretrievably lost.

1. It is essential to maintain continual face-to-face interaction between key participants in the implementation process. In particular, those involved with assisting classroom teachers, such as Regional Coordinators, Area Facilitators, Directors of Occupational Education, and ISSOE researchers, should interact regularly with teachers who are introducing ISSOE materials into their classrooms. These teachers should not be left feeling cast adrift--as many have--with no assistance in using all the materials with which they have been provided. We feel that the Regional Coordinator is in the best position to provide linkages between the classroom teacher and supporting personnel at SED, CIOE, and elsewhere.

2. Throughout the Field Test, the typical participating teacher felt, initially at least, inadequate to perform the various tasks required. Here the importance of repeated face-to-face contact with the CIOE Field test staff was evident. Teachers soon came to realize that they already possessed the skills needed to perform adequately in the Field Test. This experience now must become more widespread. Of course, some apprehension on the part of new participants in ISSOE (both teachers and

administrators) is understandable and to be expected. It is essential therefore that continuous informal support be provided. This should maximize participant effectiveness and minimize the risk of participants being "turned off" by the system.

3. Numerous sources, from participants in ISSOE Dissemination, Phase II and the CIOE/ISSOE Field Test, to other informal conversations with key participants in ISSOE, have made it painfully evident that "bad mouthing" of ISSOE is prevalent in the field. There is very little the State Education Department can do to counteract the affects of teachers' negative criticisms. However, SED should make every effort to replace individuals at higher levels of responsibility who engage in "bad mouthing" (if the prognosis for "converting" them is poor). When these individuals are important links between the State Education Department and the classroom, their open criticism of the program, in the presence of those who are trying to implement it, can do incalculable harm.

4. Previously, one of the chief causes of complaints about ISSOE was that immediate benefits were promised but delivered late or not at all. This was especially true of the preparation of the ISSOE catalogs. These delays seemed unreasonable to teachers who are trying to implement the programs. A catalog intended and promised for September is of little value for the course in December. These delays must be avoided at all costs. Concurrently, it is essential that promises for materials delivery (e.g., catalogs) should be made only if these promises can be met. Ironically, the Field Test uncovered a number of cases in which participants had been assured that materials would be delivered when CIOE had received instructions, from the same source, not to promise those materials.

5. Implementors of ISSOE, especially those in positions of leadership such as Regional Coordinators and Area Facilitators, must believe that there is an excellent chance for ISSOE to be successfully adopted. If they have any

doubts regarding the quality of materials or other products, they should keep these doubts to themselves rather than raise doubts in the minds of those who are trying to implement these very materials.

6. During the Field Test teacher participants were required to meet with CIOE/ISSOE staff after school in order to plan for implementation. These sessions presented an extreme hardship for teachers, often tired from the work day and preoccupied with other thoughts. For ISSOE to be implemented it is important to minimize the number of after school and evening workshops. Participants in these sessions should be provided released time through the hiring of substitutes to teach their classes. In this manner teachers can devote a normal workday to the workshops they need in order to feel confident with implementation.

7. A "troubleshooter" needs to be available at each implementation site. We feel that the troubleshooter should be the Regional Coordinator. They would need to visit the site regularly (once a week or so) and be able to communicate easily with the implementation teacher. They would need to know what problems the teachers were having and be able to contact someone immediately who has the authority to solve these problems. For obvious reasons, this person must be trained in the change, committed to the change, and have well-developed interpersonal communication skills for developing rapport with those who are implementing ISSOE.

8. Teachers and administrators must realize that the implementation of ISSOE will not solve all their current problems. This point needs to be constantly emphasized with these participants. Concurrently, they must understand that a debugging period, possibly as long as 6 months, will take place during implementation to resolve the unique problems or characteristics which their site has.

9. Administrators, especially Directors of Occupational Education, must become thoroughly informed about ISSOE, its concepts, forms, and

procedures. However, the Field Test experience made it extremely evident that most administrators had little idea why, or how, the Field Test was being done. They knew little more than that a field test was being conducted in one of their programs. These persons need to understand the nature of ISSOE so they can assist their teachers in the Regional Coordinator's absence. Workshops with administrators from BOCES and LEAs should be held throughout the state in order to acquaint them with the philosophy and current R&D associated with ISSOE.

10. More standardized procedures need to be set up for training and recruiting teachers in the ISSOE system. Presently this is done through such an informal network of contacts that success is hit-or-miss, at best.

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